

# Black Tornado X800 User's Manual

## 1 About this manual

This manual provides installation and application software guide information of Black Tornado X800. If you want to know more Information about product, please refer this manual

### 1.1 Features:

- Uses Conexant 10bit video decoder, 10 bits high quality ADC.
- High-quality 3<sup>rd</sup> generation Silicon tuner, support worldwide TV standards
- High-quality SMD capacitance material, 4 layers PCB and power stable design
- Support TV/AV/S-video/3.5 Stereo input.
- Support Nicam and A2 TV stereo

### 1.2 Functions:

- Full channel scan, up to 125(PAL)/200(NTSC) TV channels receiving
- Support TV/AV/S-video/Composite input
- Real time recording Mpeg1/2 video and audio files
- Video Optimize Technology
- Multi-channel preview: You can preview up to 16 channels at one time
- Snapshot: Can snapshot the TV program
- Video Desktop: Can set the video as the windows desktop background
- Window scaling: Can change between the full screen and one window.
- Schedule recording: By weekly, daily, monthly, you can set watch and/or recording specified channel at specified time.
- Time shifting: Never lost any your favorable program.
- Intelligent Channel search and delete no signal channel automatically

### 1.3 Application:

- Internet Video meeting
- Video conferencing
- Video and audio E-mail
- Video and audio recording and editing.
- Create VCD, DVD and website.
- Corporation briefing and advertisement short clips

### 1.4 System requirements

#### Minimum OS requirements (Only for watching TV)

- 450 MHz Pentium II CPU or same coequality CPU.
- 128 MB RAM (minimum)
- Support Overlay VGA Card
- Sound card for audio
- PCI interface
- DIRECTX9.0C
- CDROM (For install program)
- Windows XP, 2000, Me, 98E
- Available 30M HDD (install driver and application, e.g. Black Tornado X800), add other room for recording.

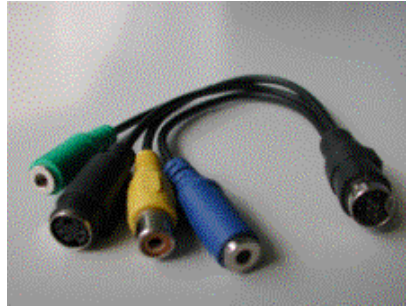
## 1.5 Recommended OS system (Watching TV and recording DVD)

- Above P4-2.4 GHz CPU
- 256 MB RAM
- SoundBlaster sound card for audio
- PCI interface
- DIRECTX9.0C
- CD ROM (For install program)
- Windows XP SP2
- Available 30M HDD (install driver and application, e.g. CardTV2), add 600M/h-3G/h for recording.
- ATX power source and Host computer can support PCI2.2

## 1.6 Packing contents:



Black Tornado X800 Card



Multiple function Cable



FM Antenna



Audio cable II (25CM)



IR Remote Receiver



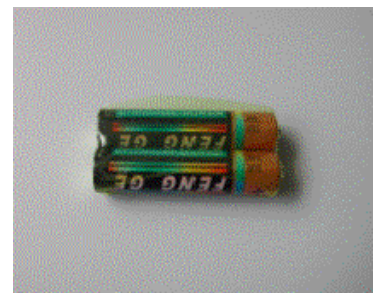
Remote Control handset



CD



Manual

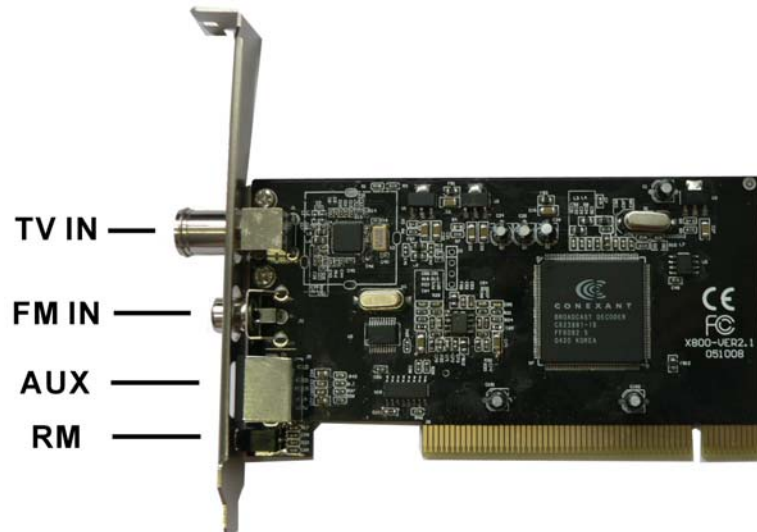


Batteries (AAA)



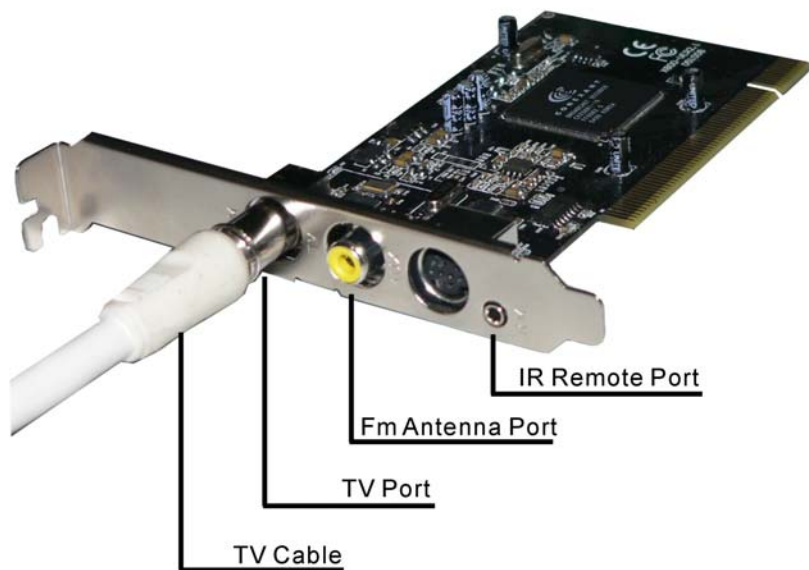
Low profile Bracket (Optional)

## 2 Black Tornado Connection



- TV IN TV signal input port.  
 FM IN FM signal input port.  
 AUX Multiple function A/V input/ output port  
 RM Infrared receive port.

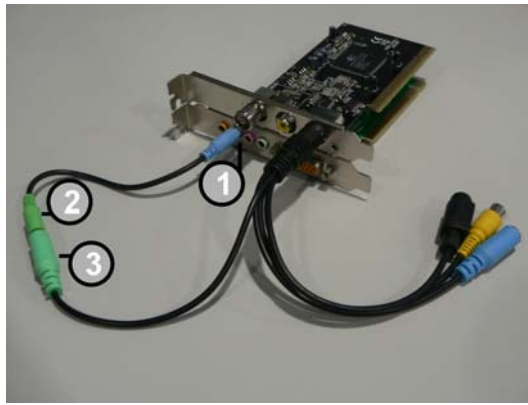
### 2.1 Connection Chart:



TV cable, FM antenna and IR receive:

- 1、 Connect TV cable with TV port
- 2、 Connect Antenna with FM port
- 3、 IR receiver connect with IR remote controller

### 2.2 Audio cable connection



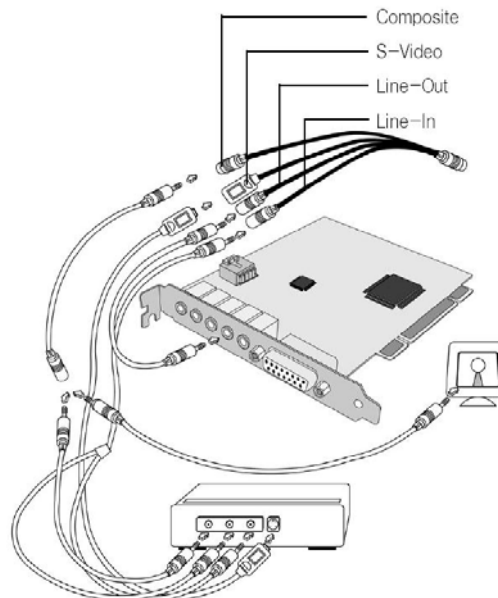
1—Sound card line input port

2--- Audio cable 's other port

3--- Multiple function cable output port

Connect Method: One port of Audio cable connects sound card line input or Microphone input (not recommended), another port connects with multiple cable output.

### 2.3 Video Input connection



- 1、 Video source with Composite or S-video connect with Multi-function composite or S-video via the opposite connect cable
- 2、 Audio cable connects to audio input port.
- 3、 Audio output and sound card input connect to microphone.

Yellow port: Composite video input, RCA port

Composite

Black port: S-Video input, normal four ports

S-Video

Green port: Audio output, 3.5 stereo port

Line-Out

Blue port: Audio input, 3.5 stereo port

Line-In



## 3 Driver and Software installation

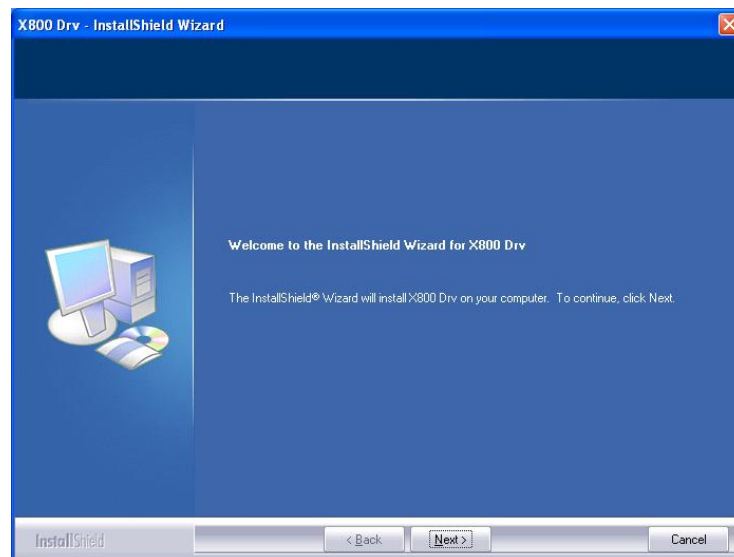
When insert CD, OS will promote setup automatically.



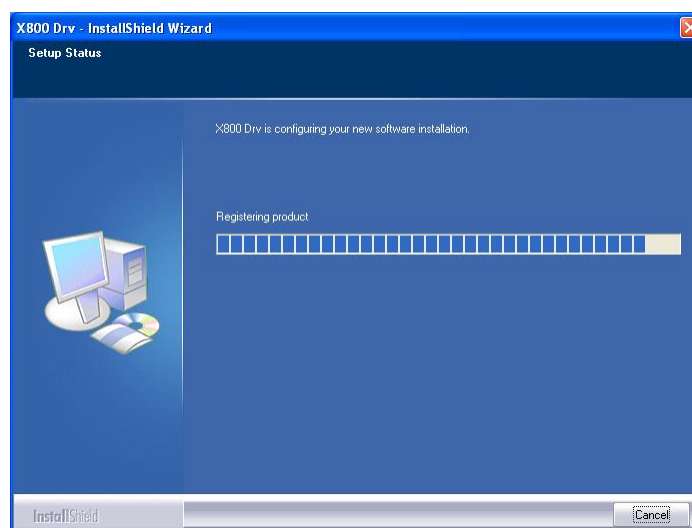


### 3.1 Driver Installation

Step 1: Insert the driver CD into CDROM, browse the CD, Click “Driver Install” or run Driver\Setup.exe, then press “next ” to continue.



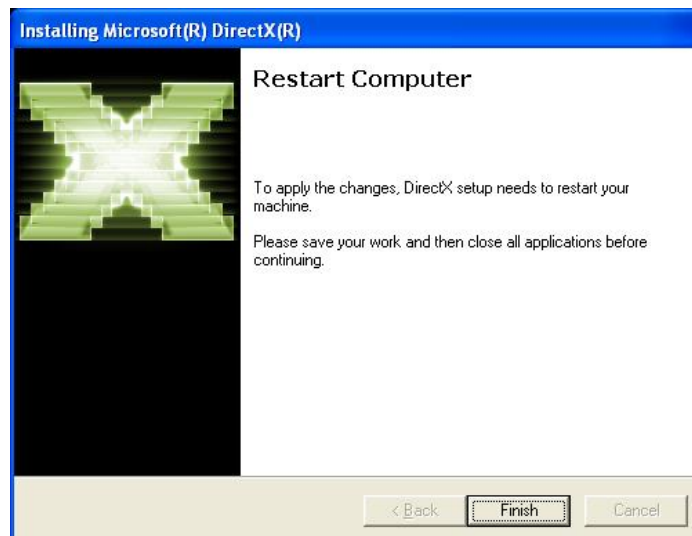
Step2: Click “next” to continue installation



Step3: Please install Microsoft DirectX 9.0 at first, choose “I accept” then click “next” to continue.



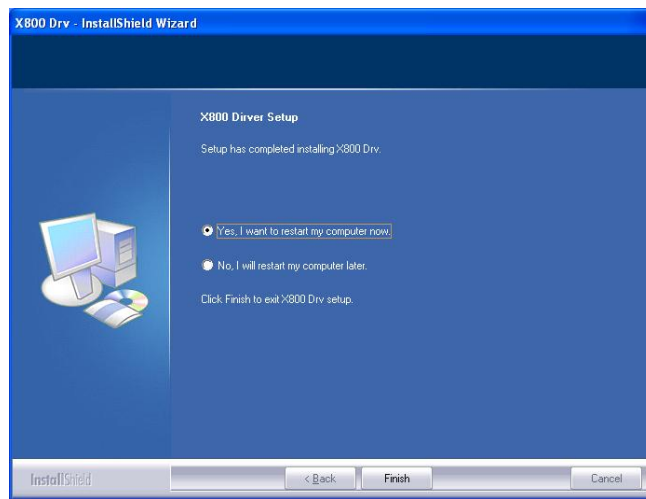
Step4: Click “finish ” to install Microsoft DirectX 9.0



Step5: Find the equipment for “PCI 88x Video Capture” and click “still continue ”.

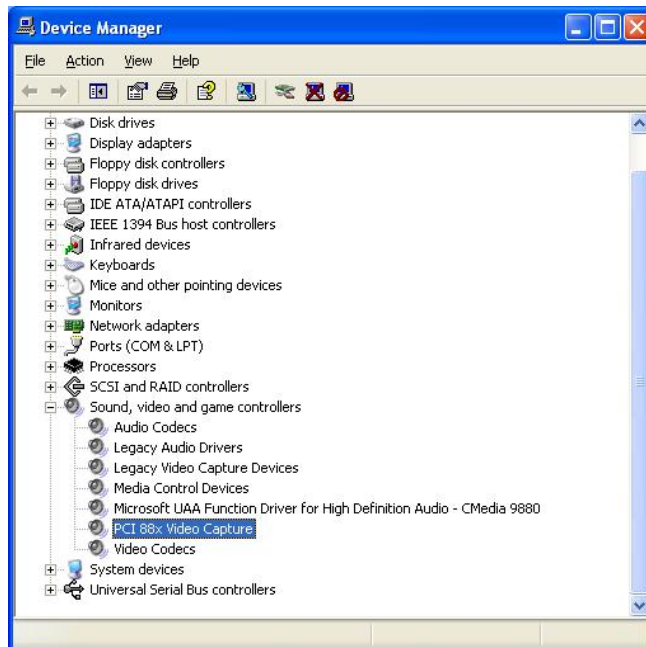


Step6: System will inform you to restart PC by click “finish” after installation.



Step4: Open control panel and select “System” — “System Properties” — “Device Manager” — “Hardware”, then check whether the driver has been installed correctly.

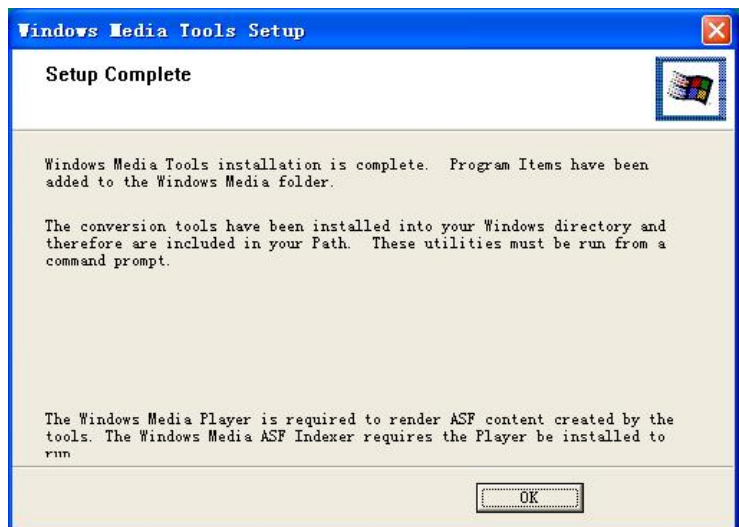
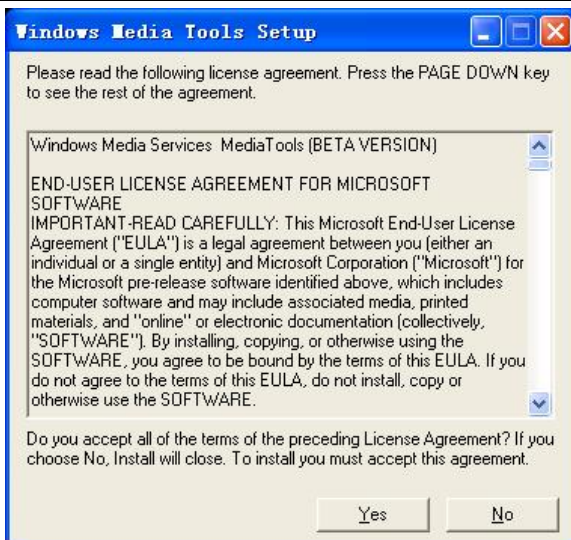
### PCI 88x Video Capture



## 3. 2 Install the application for Black Tornado X800

Click “Software Install” or run X800\Steup.exe to install Black Tornado X800.

Step1: Click “Yes” to install “Windows Media Tools”



Step2: Click "Yes" after install "Windows Media Format9"



Step3: After Windows Media please click "Next" to follow the guide of X800

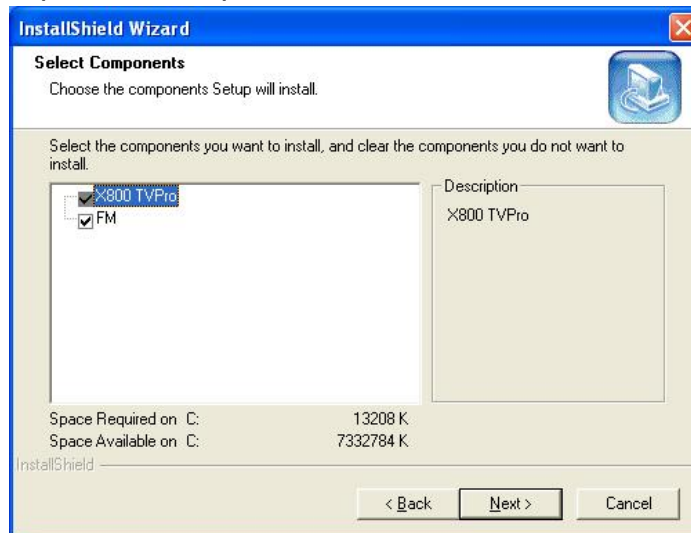


Step4: Choose route for installation if you want to change the recommended, please click "browse" and click "next" (Recommended is better)

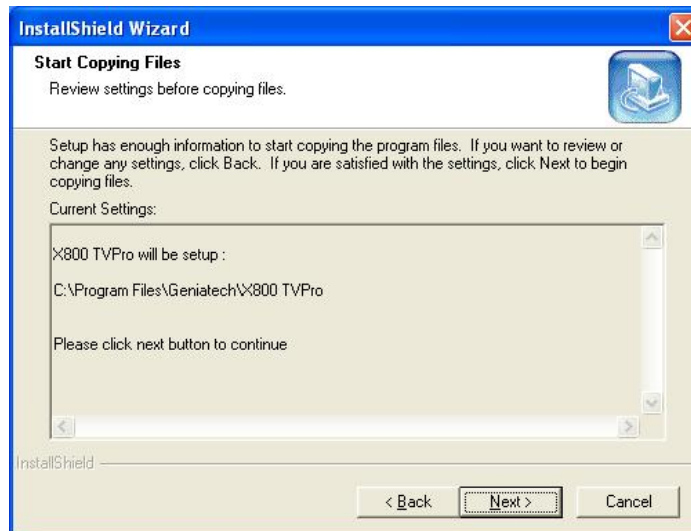




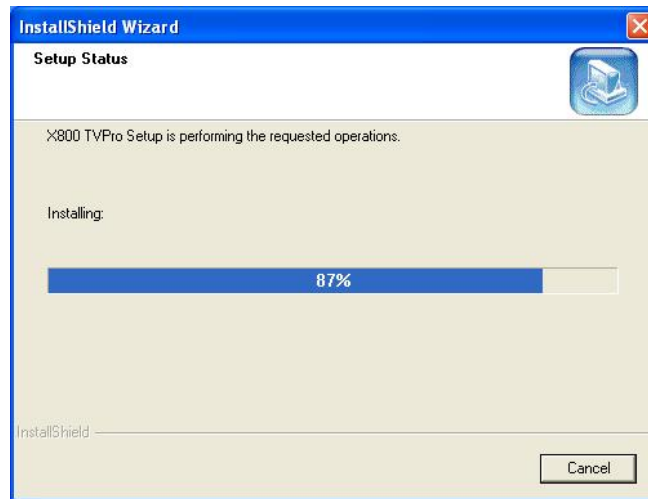
Step5: Choose installation parts in multiple chooses and click “next”



Step6: Click “next” to start installation



Step7: Program starts to copy files.



Step8: Click “finish” to restart your PC after installation

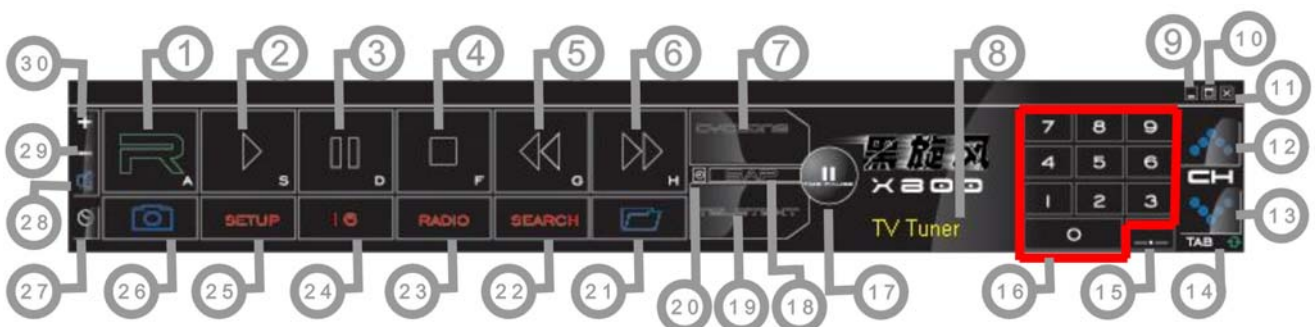


Step9: You will see X800 TVPro icons as bellow



## 4. Software usage


### 4.1 Black Tornado X800 User Interface



NO	Description	NO	Description
1	Start to record	16	Digit keys
2	Play recorded files	17	Time-shifting
3	Pause	18	Shift stereo
4	Stop	19	Teltext
5	Back forward	20	Shift video source
6	Fast forward	21	Open the recorded file
7	Hue control	22	Auto scan channel
8	Status window	23	Switch to FM
9	Minimize	24	16 channels preview
10	Full screen, Window and video desktop switch	25	Setting Setup menu
11	Exit Black Tornado X800	26	Snapshot
12	Jump to next channel	27	Schedule recording
13	Jump to last channel	28	Mute
14	Back to previous channel	29	Volume down
15	Ten channels	30	Volume up

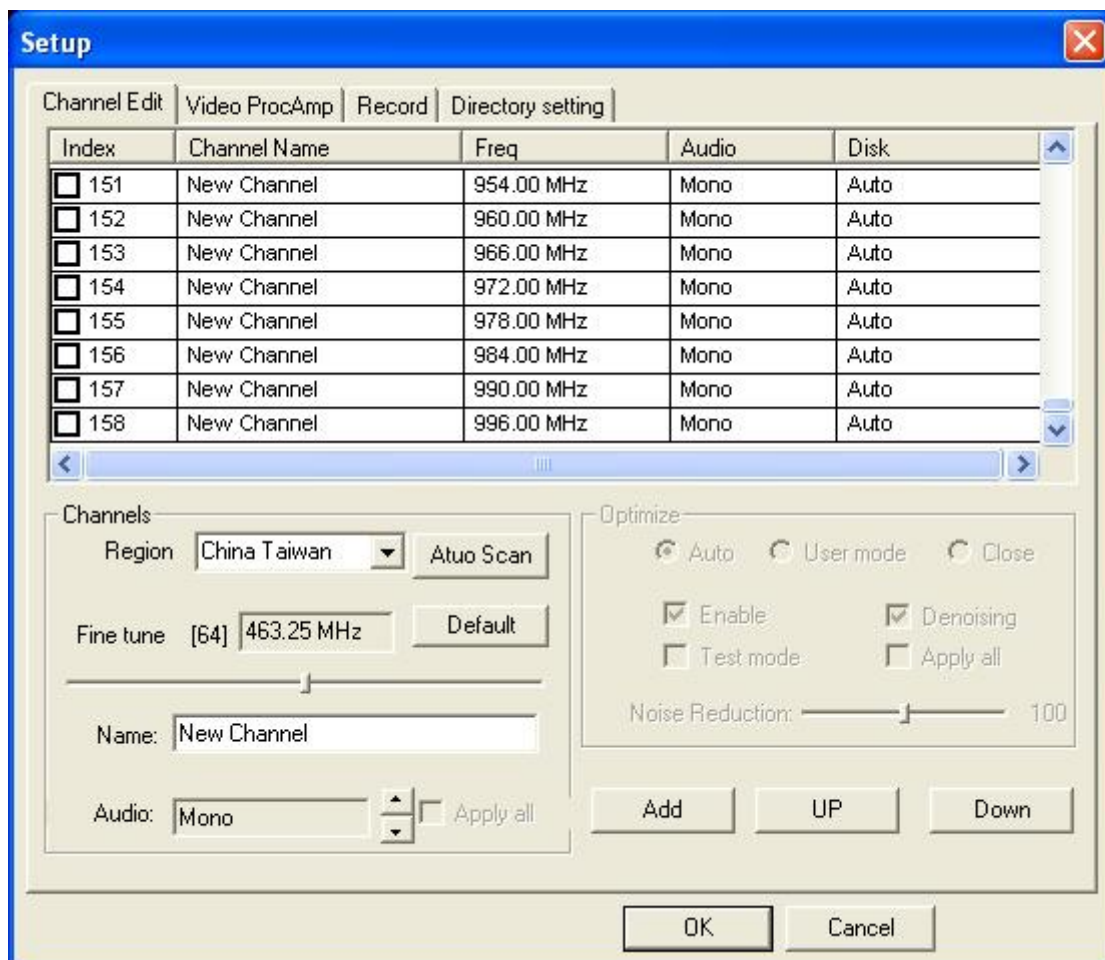
**Remark: The function with sign “\*”, which is not applicable to X800**

## 4.2 Setting

Click  on Black Tornado X800 to setting all the Function.

### 4.2.1 Channel list edit

Black Tornado X800 auto scan all channels, you can edit your favorite channels.



Please choose your country and area firstly and before scan channel as shown.



#### 1. Channel scan: Full channels scan



- 1、 Press **SEARCH** to start Black Tornado X800 and automatically scan all channels according to your region. You can find the button of automatic scan in channel edit menu.
- 2、 When Black Tornado X800 is scanning channels, the program will mute the volume and show in turn in the channel left.

#### 2.Channel Rename

You can re-define channels name as follows:

Step 1 Show the important channel;

Step 2 Press the right key on mouse; you can change the channel name;

Step 3 Input the new name;

Step4 If you want to change other channel's name, please repeat Step 1 to Step 3.

Step5 Channel position can be revised Up and Down button

#### 3.Channel fine tune

Black Tornado X800 provide fine tune function, usually, Black Tornado X800 provide the best quality image, so the fine tune is not the normal step.



#### 4. **Channel Skip and restore:** skipping and adding channel function.

- 1、 Channel skip: Reserve the channel by click and give a tick on "index", or skip this channel

Index	Channel Name	Freq	Audio
<input type="checkbox"/> 1	New Channel	73.25 MHz	Mono
<input checked="" type="checkbox"/> 2	New Channel	55.25 MHz	Mono
<input type="checkbox"/> 3	New Channel	61.25 MHz	Mono
<input type="checkbox"/> 4	New Channel	67.25 MHz	Mono
<input checked="" type="checkbox"/> 5	New Channel	77.25 MHz	Mono
<input checked="" type="checkbox"/> 6	New Channel	83.25 MHz	Mono
<input checked="" type="checkbox"/> 7	New Channel	175.25 MHz	Mono
<input type="checkbox"/> 8	New Channel	181.25 MHz	Mono

- 1、 Channels add: Press the "Add" button, you can add a new channel then define channel name and frequency.



### 5. Channel TV audio setting:

Select the specified channel, press the right key on mouse, four states: Mono, Stereo, Language single A and Language double B. The default is Mono.



**Remark: If stereo, the signal source must support this function.**

### 6.TV Standard

TV standard is different by the country of your located

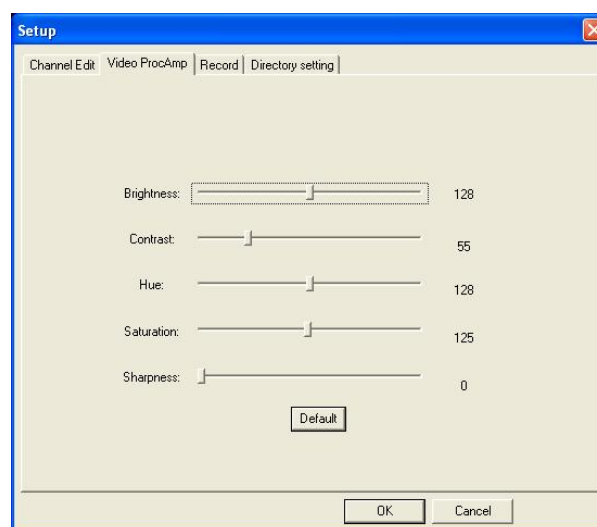
**NTSC (National Television Systems Committee):** America, Taiwan, Canada, Japan, Middle America and South America.

**PAL (Phase Alteration Line):** Europe, China, Australia, Middle Africa and South Africa.

**SECAM:** France, Africa and Middle East.

#### 4. 2. 2 Color Control

Change the brightness/contrast/color/saturation/sharpness to specified value. And if you want to change back to default value, you can press the default button.



### Remark

When black screen if you are watching TV, you can use the default key to solve this problem.



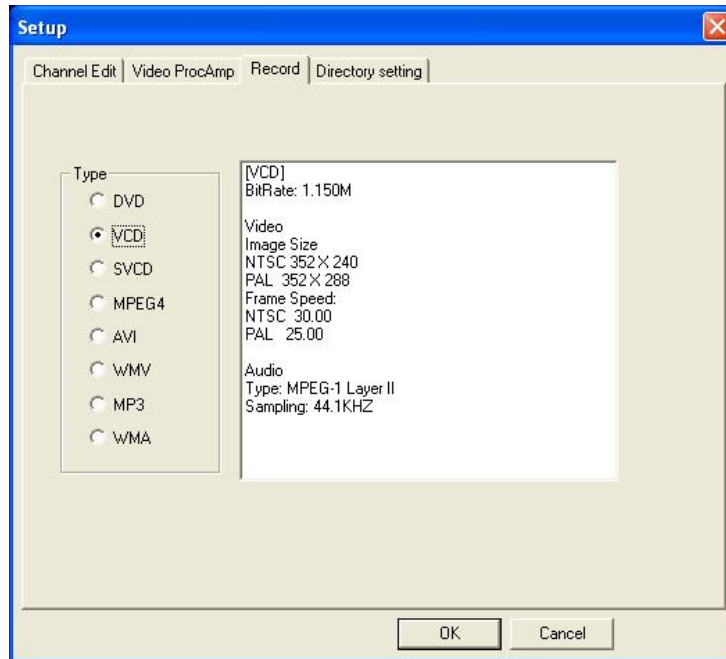
### 4. 2. 3 Recording option

Format: DVD/SVCD/VCD/AVI/MPEG4/WMV/WMA/MP3

Size: Recording size from 352x240 (NTSC) 352x288 (PAL) to 720x480 (NTSC) 720x576 (PAL).

Video bit rate: Bigger bit rates will cause more disk space usage, but will bring better video quality.

Audio bit rate: Higher audio bit rate will cause more disk space usage, but better audio quality.



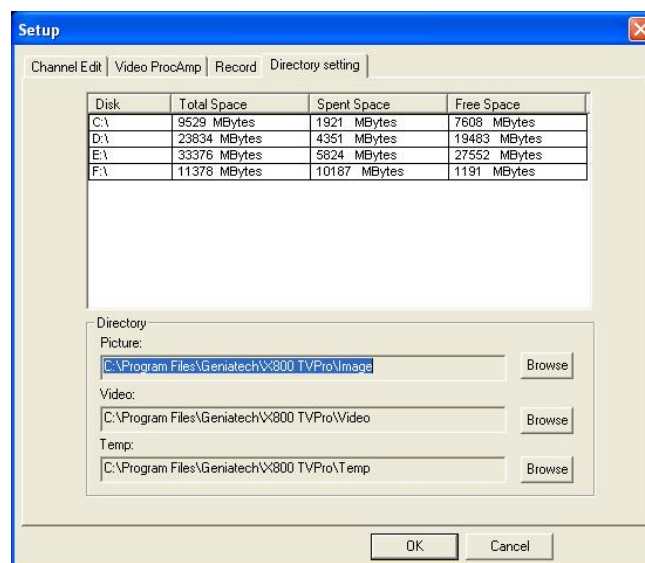
### Remark

High quality image need more space, if space is limited, you should adjust the recording setting to help you save long programs.

### 4. 2. 4 Saving path setting

You can choose the directory to save the still images or video files.

You also can press **Brower** to check the direction of images or video files.



## 4. 3 Mouse right click

When right click the mouse, a popup menu appears:

### 4. 3. 1 Always on top

The TV Window always on the top.

#### 4.3.2 Display panel

Display/Hide software control panel

#### 4.3.3 Full-screen mode


Enlarge the window to full screen, double click on the screen will return to window mode

#### 4.3.4 Teletext

Support Teletext function

#### 4.3.5 Desktop mode



Watching TV on desktop of windwos, press  to return window model.

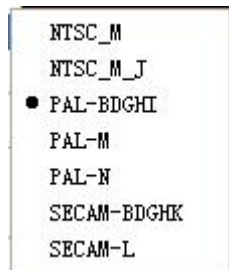
#### 4.3.6 Video Input

Select the appropriate video input, have three options: TV tuner, Composite and S-video. The default is TV tuner.



#### 4.3.7 Video standard

Change the video format to PAL/NTSC/SECAM, Default as PAL-BGGHI



#### 4.3.8 Color adjust

Adjust the color and brightness

#### 4.3.9 Capture:

Take a single frame snapshot. The format of default is saved as .bmp file

#### 4.3.10 Channel editing:

You can edit your favorite channels, for more information please refer 4.2.1

#### 4.3.11 Directory setting

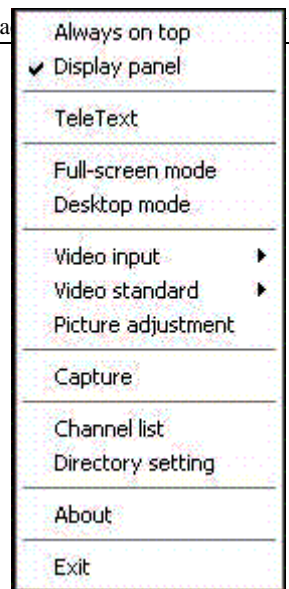
Select which directory to save the recordings and images. For more info please refer 3.1.4

#### 4.3.12 About...

Show version and copyright.

#### 4.3.13 Exit:



Exit Black Tornado X800.



## 5. Black Tornado X800 software usage

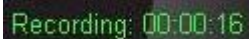
### 5.1 Recoding: Black Tornado X800 support MPEG-1 and MPEG-2 format



5.1.1 Recording: Press  when watching TV program to recording. Press  to stop recording. You can name this file or save as default.

5.1.2 Status panel will show the real-time recording information and shield some information about recording.





### 5.1.3 Recording file space requirements

Desk space required depend on the format when you recording. There is some information for you reference.

Format	Resolution	Video bit rate (Mbps)	Audio bit rate (Kbps)	Desk space
NTSC DVD	720*480	6	224	2.6GB/hr
NTSC SVCD	480*480	2.42	224	1GB/hr
NTSC VCD	320*240	1.15	224	600MB/hr
PAL DVD	720*576	6	224	2.6GB/hr
PAL SVCD	480*576	2.42	224	1GB/hr
PAL VCD	352*288	1.15	224	600MB/hr
AVI	352*288		224	
MPEG-4	352*288		224	
WMV	352*288	1.2	224	About 650MB/hr
MP3			224	
WMA			224	

## Note

**Please choose right format when recording TV program.**

## 5.2 Schedule Recording

You can record your favorite program as you specify, such as from Monday to Friday you record specified channel at specified time period.

### 5.2.1 Schedule Recording.



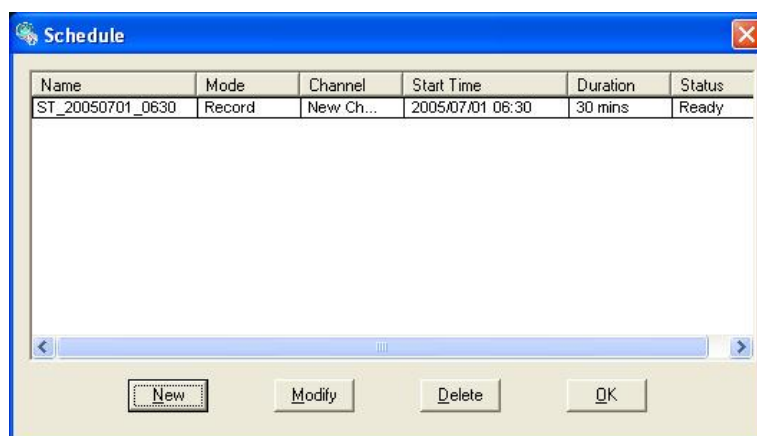
Click  to start Schedule Recording

New: Add a new Schedule Recording Task

Modify: Modify the task you have chosen

Delete: Delete the task you have chosen

OK: Press the button, all schedule recording tasks on active.



### 5.2.2 Add task.

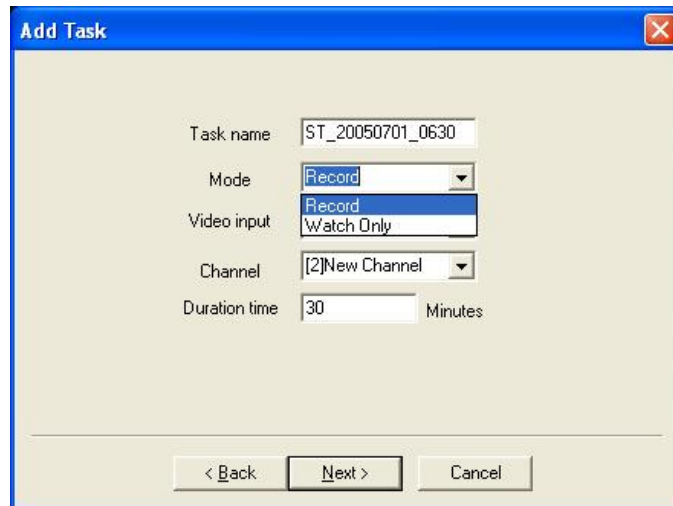
Name: The name of new task

Mode: There are two options: Recording or watching

S-VIDEO Video input: TV tuner/Composite/S-Video

Channel: Under TV condition, you can choose channel you need to schedule watching or recording

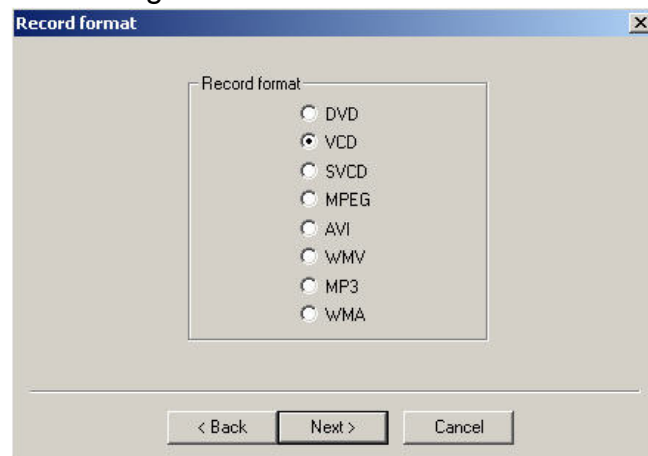
Duration: The recording duration time of task. Minimize: 2mins. Default as 30mins.



The 'Add Task' dialog box contains the following fields and controls:

- Task name: Text box containing 'ST\_20050701\_0630'
- Mode: Dropdown menu with 'Record' selected
- Video input: Dropdown menu with 'Record' and 'Watch Only' options
- Channel: Dropdown menu with '[2]New Channel' selected
- Duration time: Text box containing '30' followed by 'Minutes'
- Navigation buttons: '< Back', 'Next >', and 'Cancel'

5.2.3 Click "Next" to choose recording format.



The 'Record format' dialog box contains the following controls:

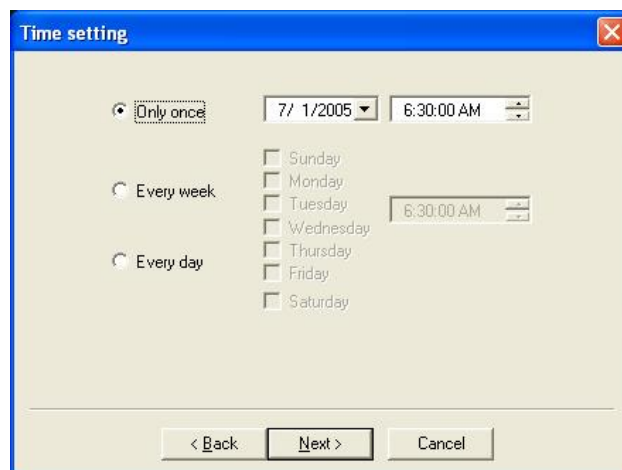
- Record format: Radio button group with options:
  - ☐ DVD
  - ☒ VCD
  - ☐ SVCD
  - ☐ MPEG
  - ☐ AVI
  - ☐ WMV
  - ☐ MP3
  - ☐ WMA
- Navigation buttons: '< Back', 'Next >', and 'Cancel'

5.2.4 Click "Next" to date and time setting. (Time format is 24 Hours)

Only once: Only one times every task.

Every week: Repeat recording, you choose one day every week or some days in one week.

Every day: You can record every day.



The 'Time setting' dialog box contains the following controls:

- Frequency: Radio button group with options:
  - ☒ Only once
  - ☐ Every week
  - ☐ Every day
- Date: Text box showing '7/ 1/2005' with a dropdown arrow
- Time: Text box showing '6:30:00 AM' with a dropdown arrow
- Days: List of days with checkboxes:
  - ☐ Sunday
  - ☐ Monday
  - ☐ Tuesday
  - ☐ Wednesday
  - ☐ Thursday
  - ☐ Friday
  - ☐ Saturday
- Navigation buttons: '< Back', 'Next >', and 'Cancel'

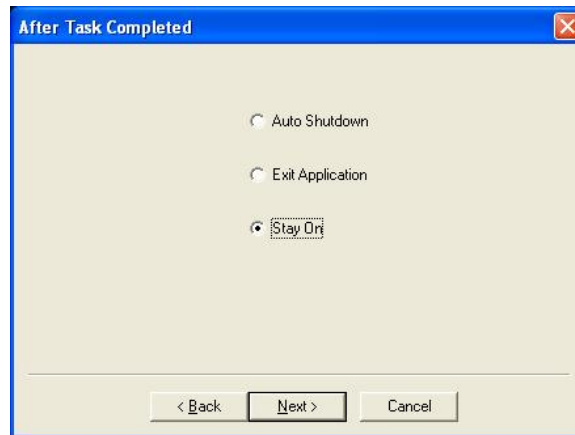
5.2.5 After finish setting, click "Next" to start schedule recording setting, then you need decide how to act when finishing the recording:

There are three ways to do when finish recording:

Auto shut down: After recording, system auto shut down (Power off the PC)

Exit Application: Exit program and keep PC on

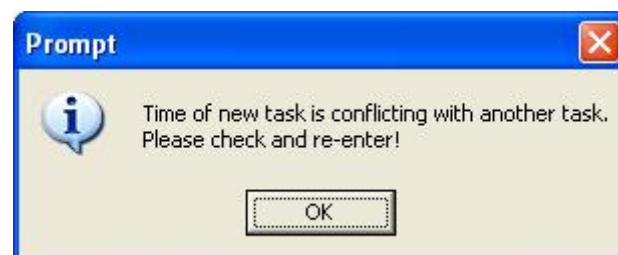
Stay on: Continue watching TV (keep software alive)




5. 2. 6 After record setting, click "Next", then system will promote "Finish" message automatically, please click "finish".



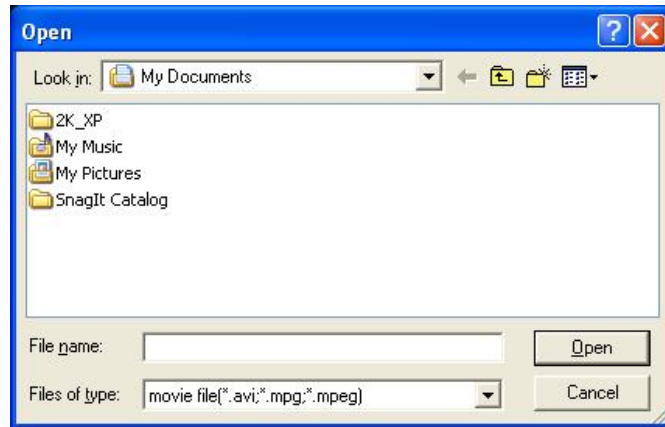
5. 2. 7 If OS send this message as follow when add one more tasks, which mean have conflict on time of other task. Please revise task time setting.



### 5. 3 Video playing

5.3.1 Press , open files you recorded files earlier and choose the files you want to play, double click or press "Open" button.






5.3.2 While playing, control panel will show time information and functions about playing.

Playing: 0:30:37

## 5.4 Snapshot



5.4.1 When watching TV press  button to capture the picture and save as .bmp format.

5.4.2 After pressing snapshot button, system will promote you to save this picture, double click this picture you will interview and edit.

5.4.3 When you want to delete picture, please press Delete button.



## 5.5 Channel preview

Before previewing, you must finish the channel scanning.


### 5.5.1 Change channel:



5.5.1 When watching TV, press  or  to go to next or last channel.

5.5.2 Page **Up** and **Page Down** on keyboard, or IR Remote provide the same functions. Press the



digital keys  to jump specified TV channel, If you want to watching TV which channel number is bigger than 10 (above 10), you should press two or more digit key. If you want to return the channel, you should press digit key.


Remark: If you want to choose the channel of two digits, you can press the digit button

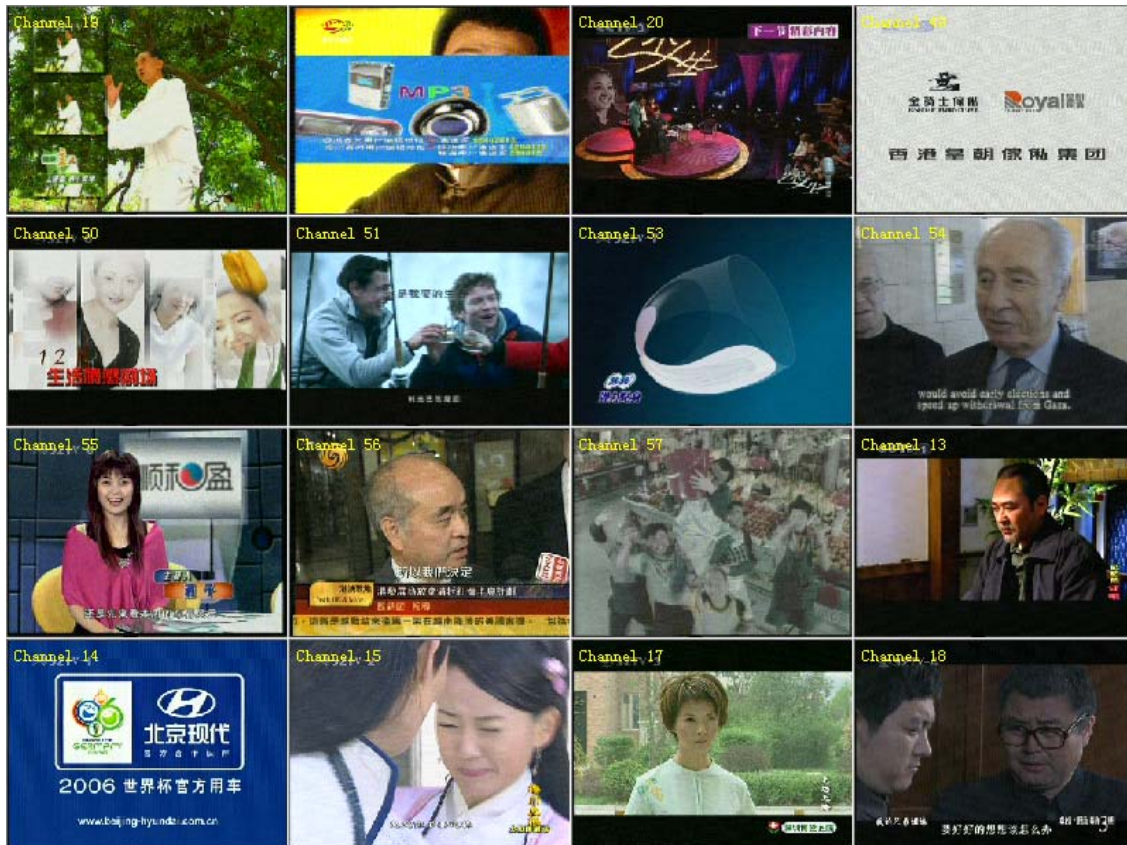
5.5.3  to return the channel previously.

### Remark

Refer channel setting instruction when there have some channels lost.

## 5.5.2 Channel Preview

Press  to preview 16 channels on the same time. Choose the right channel directly to watch by click mouse on the small window.



## 5.6 Time-shifting function

Time-shift lets you pause, replay, or skip commercials during watching live TV, without interrupting an ongoing recording session. Time-shift gives you absolute new feeling over how you watch television, which you never have before. For example, you watch your favorite sporting game, pause the live action and help yourself to an ice-cold beverage from the fridge.

Time-shift temporary saves the video to your hard disk for a specified period of time. When you return to your seat, you can resume viewing the program from the point where you left.

### Caution

Time-shift can use significant disk space and cannot automatically skip commercials.


#### 5.6.1 Additional Discussion

In Time-shift, you are recording to and playing back from the same video file or buffer. You can playback from various locations in that buffer. Similar to video playback, you can pause, fast-forward, and rewind. A major difference, however, is that X800 software is simultaneously recording live television while playing back from the buffer.


That means you will see greater CPU utilization during Time-shift because you are simultaneously recording and playing recorded videos. At full DVD quality, time-shift can require up to a 1.7 GHz CPU and above.

#### 5.6.2 Time-Shift usage




Press  button to active it, then Time Monitoring bar will appear. The Time Monitoring bar informs you of how much of the time-shift buffer are in use. You can also use your mouse to drag the Time Control Shuttle to jump to a specific time.

### 5.6.3 Exit Time-shift function

Press  button to exit time-shift function.

### 5.7 TELETEXT

Press  button, activation TELETEXT function. The function let user to receive TELETEXT TV.

**Remark: This function must have TeleText TV signal to support. Not all the TV program has TeleText**

### 5.8 Hue control



**De-interlacing display technology quick button**



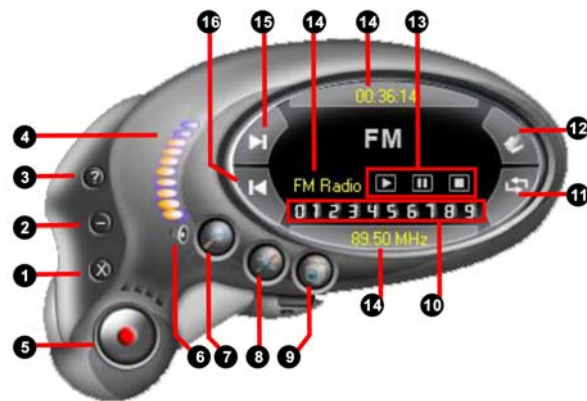
**High-grade brightness technology quick button**



**Professional blur technology quick button**

# 6 Black Tornado X800 FM

## 6.1 FM Interface Explanation



NO	Description	NO	Description
1	Exit FM	9	Shift to TV
2	Minimize	10	Channel digit key
3	FM copyright	11	Back to preview channel
4	Volume bar	12	Open recorded files
5	Start Record	13	Play recorded files Pause/stop recorded files Stop play next recorded files
6	Mute	14	Display window state
7	Auto scan channel	15	Jump to next channel
8	Setup menu	16	Jump to last channel

## 6.2 Setting Function Option



Click in control panel to set all function.

6.2.1 Broadcasting setting: FM can automatic sort usable broadcasting station, then you can set all broadcasting list. Please see below instruction.

6.2.2 Auto Scan: Broadcasting setting: FM can automatic sort usable broadcasting station, it also can be rescanned.



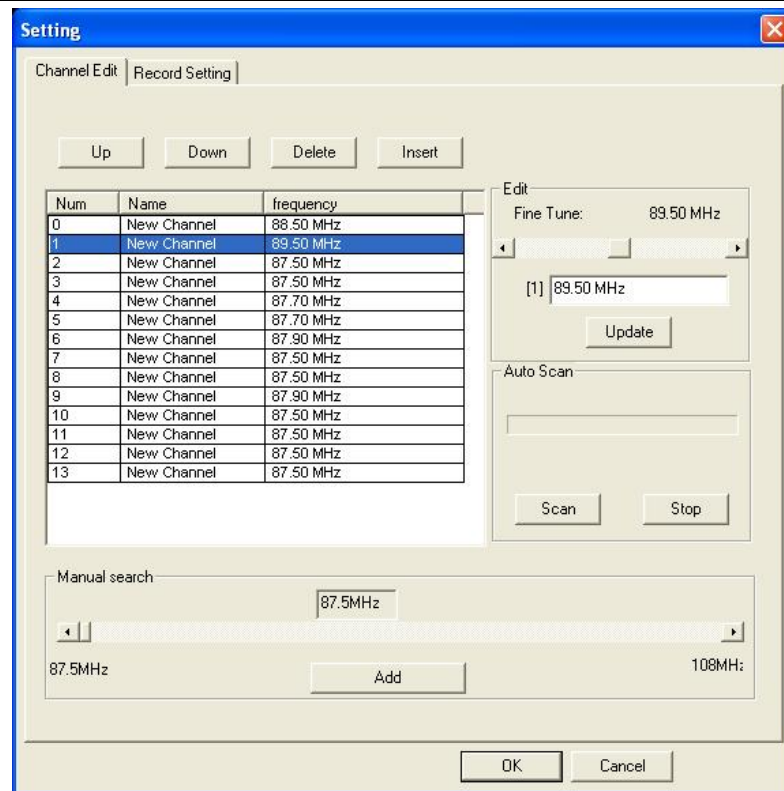
一、 Press to start automatically scan all channels according to your region. Press



to stop the scan channel in any time.

二、 Click “ Scan ” in Channel setting menu to search. If you want stop channel scan, please click “ Stop ” .

Black Tornado X800 FM can automatic scan broadcasting and shown channel list.



### 6. 2. 3 Channel Rename


You define channels name as follows:

Step 1 Show the important channel;

Step 2 Press the right key on mouse; you can change the channel name;

Step 3 Input the new name

If you want to change other channel's name, please repeat Step 1 to Step 3.

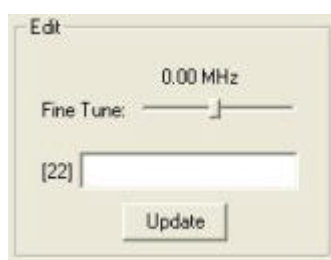
Press  button to affirm the modification.

Channel position can be revised Up and Down button


### 6. 2. 4 Channel fine tune

FM provide fine tune function, If the adjust is no good, you will be back the default.

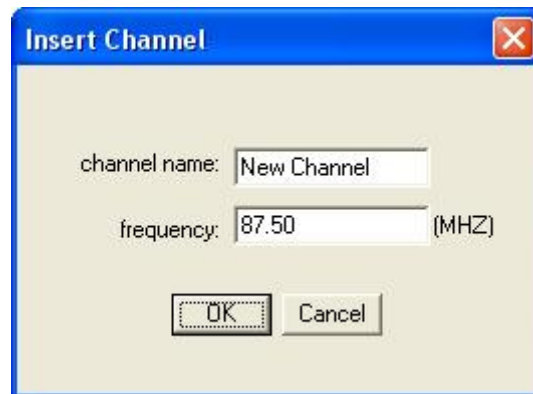
Usually, FM provide the best quality image, the fine tune is not the normal.



### 6. 2. 5 Channel add

Press  to invoke Channel Add function, Channel name and frequency value should be input which user defined



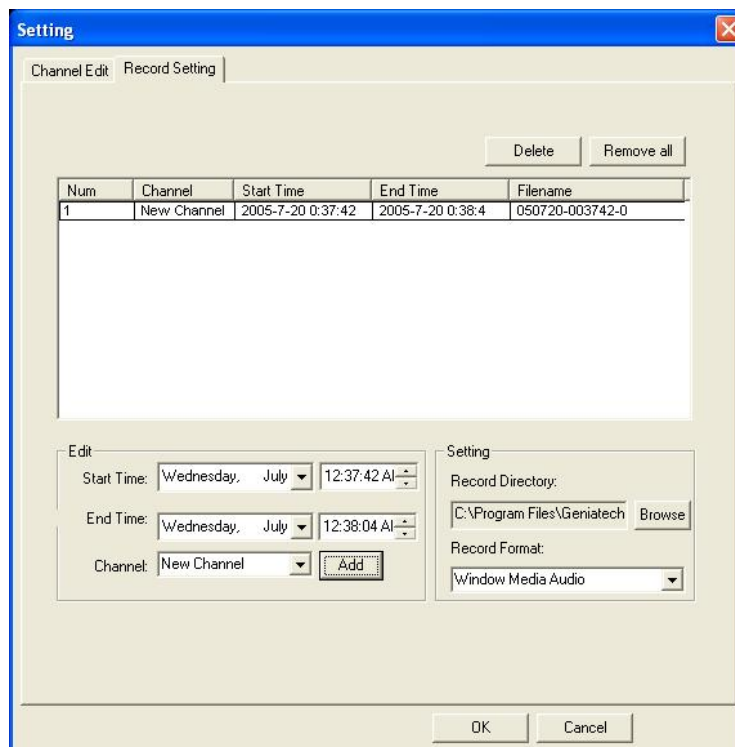


Input your Channel Name

Input the Frequency Value

Press **"Confirm"** to finish the Channel addition, there is addition channel in channel list.

### 1.3 Recording Setting



- Record format option

Two format can be chose: MP3 and WMA

- Save location

Click "Browse" to choose save directory

- Timing record setting

- 1、Choose starting and end time in Add taskbar, then click "Add"
- 2、Click "Delete" to cancel the task, "delete all" can cancel all tasks.
3. If appears below message, please check if there is a time conflict in all tasks.





4.Below is Timing date: (Red is the date needed to set)



## 7 FM application

You can use FM application to listen to the FM radio and record the FM radio into WMA, MP3 and WAV files and store in your hard disk.

### 7.1 Record


7.1.1 Recording: Press  when watching TV program to recording. Press  to stop recording. **You can name this file or save as default.**

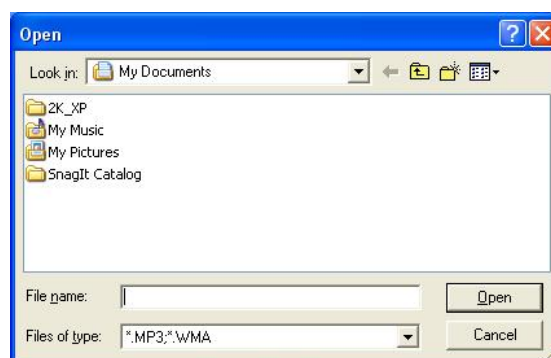
7.1.2 When recording, the panel of FM application software will show the real-time recording information about recording.



### 7.2 Play audio file

FM application can play recorded audio files.

7.2.1 Press  and double click you want the program to play the audio files.



7.2.2 While playing, the application software will show information about the playing status.




### 7.3 Channel

Before using channel related functions, you must do the channel scanning first.


7.3.1 When listening FM, press  or  to switch fast forward or back forward channel.

7.3.2 By using **Page Up** and **Page Down** keys on keyboard, you can change the channel rapidly, or

IR Remote provides the same functions. Press the digital keys  to jump specified TV channel.

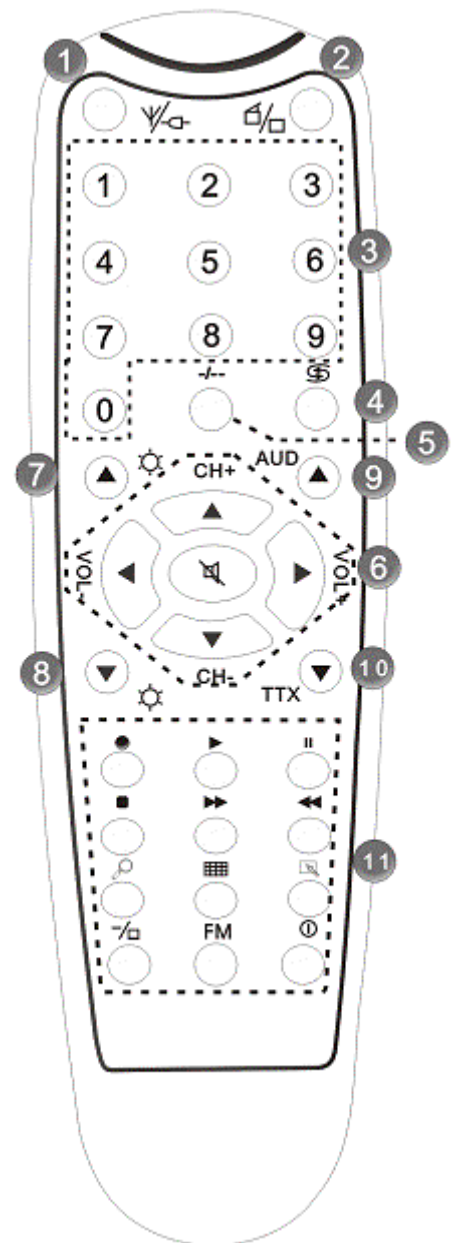
7.3.3 By click  to return the previous channel.

### 7.4 About FM application software

Press  button, you can get the version information.

## 8 Remote control handset

Key NO	Description
1	Switch input source: Switch from TV, Composite video and S-Video
2	Turn On/Off X800 application software
3	Digital Keys
4	Return to previous channel
5	Single/double/triple digit
6	CH+, CH-; Channel Up/Down VOL+, VOL-; Volume Up/Down Mute
7	Brightness up
8	Brightness down
9	AUD: Stereo/Mono
10	TTX; Teletext
11	Record: Record/stop Play: Play recorded files Pause Stop/record Fast forward Back forward Auto scan channel Snapshot Setup menu Full screen window and video desktop switch FM: Switch to Black Tornado X800 FM Power on/off: Exit Black Tornado X800



## 9 FAQ

Q1: Why is the image discontinuity?

- A1: 1. Please check if the system is lower than the minimum requirement.  
2. Please check if the VGA card supports Direct Show or install the newest driver.

Q2: Why do the drive not be installed?

- A2: 1. Please check if the name of Facility Management is PCI 88x Video Capture.  
2. Please make sure you installed DIRECTX9.0C which is in the CD bundled with the X800

Q3: Why cannot see the image (black screen)?

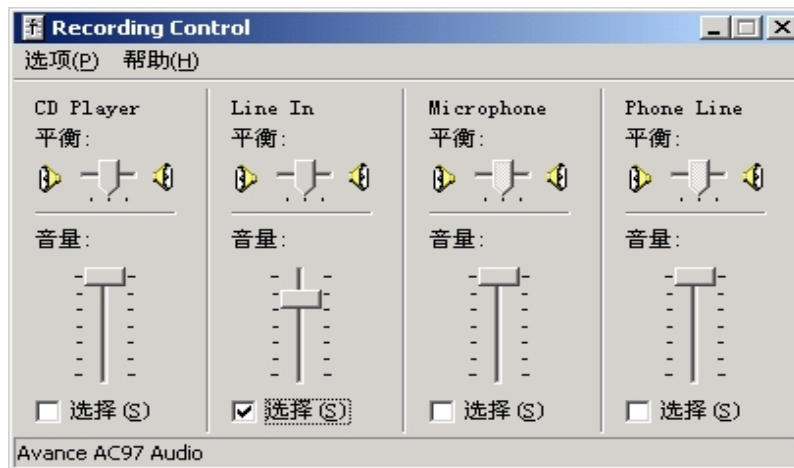
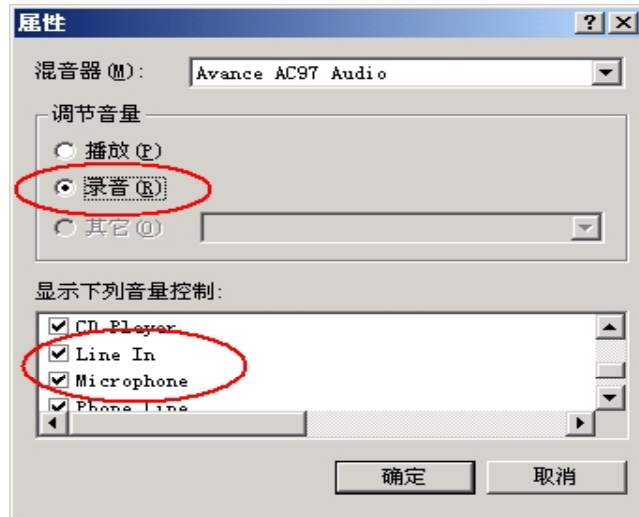
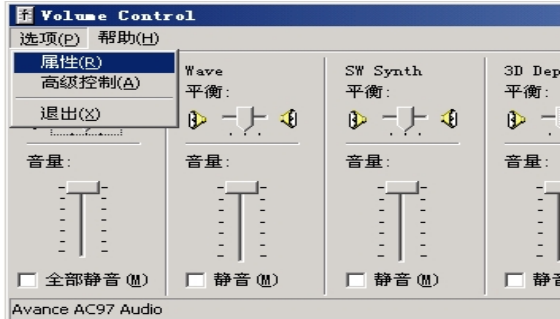
- A3: 1. Try to restart application software.  
2. Try to reinstall X800 device driver.

Q4: Why do the color and sound have problem when watching TV?

- A4: Please check if the "Country and Zone" is correct.

Q5: No Sound

- A5: 1. Please check if the audio cable connection is correct.  
 2. Please check if the Line-in of sound card is set sound output or mute.  
 Please follow up below shown to adjust.



Q6: Why is the TV quality very poor?

A6: Please check cable signal's quality. If so, please add a signal amplifier.

Q7: There are lost frame drop and A/V synchronization when playing recorded TV program.

A7: Please check if the PC system is lower than the minimum requirement. If no, please check sound drive or install WDM driver program of sound card.

Q8: Which software can I use to edit the recorded files?

A8: Can use Ulead, Arcsoft, Intervideo and Cyberlink editing software.

Q9: There are more noise when replay the record file.

A9: 1. Maybe when you record the program the volume of Line-In is too high. Please adjust the volume to middle to try again.

2. Maybe the problem is caused by Sound card, some low cost sound card has recording problem but playing no problem.

Q10: Cannot find video capture hardware

"There are no HD equipment or no video capture hardware"

A10: If the problem is appearing when you start Black Tornado X800, it means driver program didn't installed successfully.  
 Please re-install.

Q11: Remote controller is not functional

A11: 1.Please check if battery were installed correct.

2.Please check if you need new battery.

3.IR receiver is not right direction or too far away from the sender